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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,169	06/30/2000	Takayuki Urata	43890-430	9745

7590 08/25/2004

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Washington, DC 20005-3096

EXAMINER

PATTERSON, MARC A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/608,169

Applicant(s)

URATA ET AL.

Examiner

Marc A Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 13-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

REPEATED REJECTIONS

1. The 35 U.S.C. 103(a) rejection of Claims 1 – 3 and 13 – 15 as being unpatentable over Awata (U.S. Patent No. 5,866,228) in view of The Encyclopedia of Polymer Science and Engineering (Volume 12, page 225, 1985) of record on page 2 of the previous Action, is repeated.

The 35 U.S.C. 103(a) rejection of Claims 4 and 16 as being unpatentable over Awata (U.S. Patent No. 5,866,228) in view of Cheng et al (U.S. Patent No. 4,745,015), of record on page 4 of the previous Action, is repeated.

ANSWERS TO APPLICANT'S ARGUMENTS

2. Applicant's arguments regarding the 35 U.S.C. 103(a) rejection of Claims 1 – 3 and 13 – 15 as being unpatentable over Awata (U.S. Patent No. 5,866,228) in view of The Encyclopedia of Polymer Science and Engineering (Volume 12, page 225, 1985) and 35 U.S.C. 103(a) rejection of Claims 4 and 16 as being unpatentable over Awata (U.S. Patent No. 5,866,228) in view of Cheng et al (U.S. Patent No. 4,745,015), of record in the previous Action, have been carefully considered but have not been found to be persuasive for the reasons set forth below.

Applicant argues, on page 2 of Paper No. 18, that nowhere in the disclosure of Awata does it suggest any use of high temperature nor is there any glass transition point of plastic film being utilized.

However, as stated on page 2 of the previous Action, The Encyclopedia of Polymer Science and Engineering (Volume 12, page 225, 1985) teaches that polyethylene terephthalate

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polymers have glass transition temperatures ranging from 67 – 140 degrees Celsius (The Encyclopedia of Polymer Science and Engineering, Volume 12, page 225; final paragraph, ‘Thermal Transitions’). Awata et al therefore disclose a protective layer having a glass transition temperature ranging from 67 – 140 degrees Celsius.

Applicant also argues, on page 3, that Awata does not provide any reasons or motivation for a protective layer having a glass transition point of 87 degrees Celsius. However, Awata et al teach that the insulation is used for refrigeration (column 5, lines 59 – 62) and is therefore used for the purpose of maintaining a cold storage temperature inside the refrigerator, despite higher temperatures outside the refrigerator. It would therefore be obvious for one of ordinary skill in the art to provide for the highest possible glass transition temperature of the polyester layer, in order to provide a refrigerator that maintains cold storage temperature inside the refrigerator at a higher temperature than would be available if the glass transition temperature were lower.

Applicant also argues on page 3 that there is no motivation to combine Awata et al and The Encyclopedia of Polymer Science and Engineering other than Applicant’s specification.

However, as stated above, motivation is provided in Awata, clearly independent from Applicant’s specification.

Applicant also argues, on page 4, that the Encyclopedia of Polymer Science and Engineering discloses the probable operating range of the glass transition temperature, but does not suggest the problem addressed by the claimed invention involving cracking of the support layer.

However, because an operating range is stated for the glass transition temperature, the Encyclopedia teaches the range, and it is therefore not necessary for the Encyclopedia to cite the problem that is addressed by Applicant.

Applicant also argues, on page 5, that even if it is proper to combine Awata and The Encyclopedia of Polymer Science and Engineering, the resulting film does not necessarily have a glass transition temperature of 87 degrees Celsius or higher.

However, as stated above, it would therefore be obvious for one of ordinary skill in the art to provide for the highest possible glass transition temperature of the polyester layer, in order to provide a refrigerator that maintains cold storage temperature inside the refrigerator at a higher temperature than would be available if the glass transition temperature were lower.

Applicant also argues, on page 6, that unexpected results are disclosed in the specification because data is disclosed indicating that for a support layer and protective layer having a glass transition temperature of greater than 87 degrees Celsius excellent gas barrier performance and degree of vacuum are maintained after durability test at 100 degrees Celsius.

However, the specification does not specify that the results are unexpected, or discuss why the results are unexpected.

Applicant also argues, on page 7, that it does not appear as though the support layer having a glass transition temperature of 87 degrees Celsius or higher is disclosed.

However, Awata discloses a support layer comprising a polypropylene film (column 6, line 45) and discloses that polyester is equivalent to polyester as a material of a layer of the film (column 4, lines 24 – 29); a support layer having the same composition as the protective layer is therefore disclosed.

Applicant also argues on page 7 that the pending dependent claims are allowable for the same reasons which were given for the independent claims. In response, the answers above with regard to the independent claims are repeated.

Applicant also argues, on page 8, that Cheng et al lists both polycarbonate and polyethylene terephthalate as being moldable, but does provide motivation for replacing the polyethylene terephthalate of Awata with polycarbonate.

However, as stated on page 2 of the previous Action, Cheng et al teach that polycarbonate is equivalent to polyethylene terephthalate (column 3, lines 7 – 38) for the purpose of making an insulator which is readily molded or shaped (column 3, lines 7 – 38). It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for polycarbonate in Awata in order to make an insulator which is readily molded or shaped as taught by Cheng et al, and motivation is thus provided by the teaching that the polymers are used interchangeably.

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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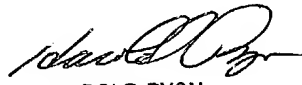
however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.

Marc Patterson
Art Unit 1772


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

8/17/04